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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,637	04/23/2001	Robert Edward Burrell	53-01	3974

23713 7590 08/28/2002

GREENLEE WINNER AND SULLIVAN P C  
5370 MANHATTAN CIRCLE  
SUITE 201  
BOULDER, CO 80303

EXAMINER

PAK, JOHN D

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 08/28/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/840,637**

Applicant(s)  
**Burrell et al.**

Examiner  
**Pak, J.**

Art Unit  
**1616**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 5/15/02 and 6/24/02.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 9 6) ☐ Other:

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Claims 1 and 3-16 are pending in this application.

At the outset, it is noted for the record that the Examiner discussed with Attorney Susan Doughty certain claim language changes on 8/8/02 and 8/9/02<sup>1</sup>. A timely agreement could not be reached. The Examiner has found a new reference and reassessed and reconsidered the prior art in the meantime.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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<sup>1</sup> The discussed changes are as follows:

Claim 1, line 5: delete "such" and insert --- so --- .

Claim 1, line 6: after "metal" insert --- into the alcohol or water-based electrolyte on a sustainable basis --- .

Claim 4, line 1: delete "claim 3" and insert --- claim 1 --- .

Claim 10, line 1: delete "nanocrystalline".

Claim 10, line 6: after "metal" insert --- in a crystalline form --- .

Claim 10, line 7: delete "such" and insert --- so --- .

Claim 10, line 9: delete "such" and insert --- so --- .

Claim 11, line 1: after "dressing" insert --- is --- .

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lorina et al. (GB 1,270,410).

Lorina et al. explicitly disclose irradiated antimicrobial metals such as silver, gold, platinum and palladium as having “remarkable bactericidal, irradiation-dissipating and similar curative functions” (see p. 1, lines 40 to 80; p. 3, lines 27-75). Particle size is  $10^{-5}$  to  $10^{-6}$  cm, which is 100 to 10 nm (p. 1, lines 84-85). UV, gamma and X-ray radiations provide the activity (sentence bridging pages 1 and 2). Acne treatment is disclosed (p. 2, lines 90-99).

While Lorina et al. do not expressly describe their antimicrobial silver particles as having “sufficient atomic disorder,” as claimed herein, it is the Examiner’s position that Lorina et al. inherently discloses the same<sup>2</sup>. The claims are thereby anticipated or at the very least rendered obvious within the meaning of section 103.

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<sup>2</sup> For support of this inherency position, see applicant’s own work, WO 95/13704, which discloses further atomic disorder generated by irradiation and activation of antimicrobial metals, even those with previously low level of atomic disorder (see from p. 26, line 1 to p. 27, line 7).

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Claims 1 and 3-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of WO 93/23092 and WO 98/41095 in view of De Cuellar et al. and CN 1291667.

WO 93/23092 discloses the atomic disorder antimicrobial metals of the instant invention, as acknowledged by applicant on specification page 6, line 32, page 9, line 31. See in the WO document, from page 9, line 15 to page 16, line 15; pages 26-27; claims 45-58

WO 98/41095 discloses the production of interference color with a base layer and a top layer of antimicrobial metals having atomic disorder, as claimed in instant claims 10-16, as acknowledged by applicant on specification page 6, line 25, page 13, line 20.

De Cuellar et al. (column 2, lines 36-40; column 4, line 32) and CN 1291667 are cited to show that antimicrobial silver particles are known to be used to treat skin infections including acne.

While the cited references do not expressly disclose using atomic disordered metals such as atomic disordered silver to treat acne, as claimed, one having ordinary skill in the art would have been motivated to do so from the teachings of improved antimicrobial activity for metals such as silver particles with atomic disorder and the known applications of silver for acne treatment. Since silver in acne treatment utilizes its antimicrobial activity, the improved antimicrobial activity obtained from atomic disordered silver would have further motivated the ordinary skilled artisan.

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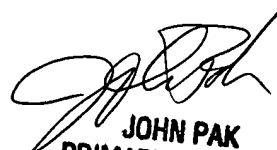
Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly suggested by the teachings of the cited references.

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machines are (703) 308-4556 or (703) 305-3592.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Pak whose telephone number is (703) 308-4538. The Examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:30 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. José Dees, can be reached on (703) 308-4628.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

  
JOHN PAK  
PRIMARY EXAMINER  
GROUP 1600